

REMARKS

Applicant respectfully requests entry of the amendments and remarks submitted herein.

The 35 U.S.C. § 102(e) Rejection of the Claims

Claims 1, 4, 7, 8, and 54-63 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by sequences in Figure 4 of U.S. Patent No. 6,818,418 (hereinafter Lipovsek). Applicant respectfully submits that the claims as amended are not anticipated by Lipovsek and requests that the Examiner withdraw this rejection of the claims.

As amended, claim 1 recites a modified human fibronectin type III (Fn3) molecule comprising a stabilizing mutation of at least one residue involved in an unfavorable electrostatic interaction as compared to the wild-type human Fn3, wherein the stabilizing mutation is a substitution of at least one of Asp 7, Asp 23 or Glu 9 with a neutral or positively charged amino acid residue. Claims 4, 7, 8, 55, 56 and 64-77 depend directly or indirectly from claim 1.

As amended, claim 57 recites a modified human tenth type III module of fibronectin (FNfn10) molecule comprising a stabilizing mutation of at least one residue involved in an unfavorable electrostatic interaction as compared to the wild-type human FNfn10 molecule, wherein the stabilizing mutation is a substitution of at least one of amino acid residues 7, 9 or 23 with a neutral or positively charged amino acid residue. Claims 59-63 and 78-79 depend directly or indirectly from claim 57.

Figure 4 of Lipovsek presents a sequence alignment between a fibronectin type III protein domain with sequences that are stated to be fibronectins from other sources, as well as sequences of related proteins. (see Figure 4, column 6, lines 31-33 and column 9, lines 9-12) The first row of Figure 4 depicts Hs FND (human fibronectin type III domain). Rows 2-9 depict alleged fibronectin sequences from other non-human sources (e.g., cow (row 2), rabbit (row 5), frog (row 7), dog (row 8) and horse (row 9). Rows 10-16 depicts sequences of other proteins (i.e., tenascin-C (row 10), tenascin precursor (row 11), collagen alpha precursor (row 13), collagen type 12 (row 14) and undulin 1 (row 16).

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon*, 919 F.2d 688, 16 U.S.P.Q.2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the art.

Scripps Clinic & Res. Found. v. Genentech, Inc., 927 F.2d 1565, 18 USPQ2d 101 (Fed. Cir. 1991). To overcome the defense of anticipation, "it is only necessary for the patentee to show some tangible difference between the invention and the prior art." *Del Mar Engineering Lab v. Physio-Tronics, Inc.*, 642 F.2d 1167, 1172, (9th Cir. 1981).

The claims as amended are directed to modified human Fn3 molecules comprising a stabilizing mutation of at least one residue involved in an unfavorable electrostatic interaction as compared to the wild-type human Fn3 molecule. The stabilizing mutation is a substitution of at least one of amino acid residues 7, 23 or 9 with a neutral or positively charged amino acid residue. Applicant submits that the sequences presented in rows 10-16 of Figure 4 of Lipovsek are not Fn3 molecules. Further, the only human sequence presented in rows 1-9 is the human fibronectin type III domain sequence itself. The other sequences presented in rows 2-9 are not human Fn3 sequences but instead are unmodified wild-type fibronectin sequences from other animals (*e.g.*, cow, dog, horse, pig, rabbit or frog).

Applicant submits that Lipovsek does not disclose each element of the claim under consideration, and a person of ordinary skill in the art would recognize differences between the claimed invention and the reference disclosure. Thus, because there are tangible differences between the invention as claimed and Lipovsek, Applicant submits that Lipovsek does not anticipate the currently pending claims. Accordingly, Applicant requests that the Examiner withdraw the 35 U.S.C. § 102(e) rejection of the claims.

CONCLUSION

The Examiner is invited to contact Applicant's Representative at the below-listed telephone number if there are any questions regarding this Response or if prosecution of this application may be assisted thereby. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-3503. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extension fees to Deposit Account 50-3503.

Respectfully submitted,

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